

SHOULD ALL UROLOGY DEPARTMENTS PROVIDE AN AMBULATORY URODYNAMICS SERVICE?

Aims of Study

Conventional urodynamic studies (CUS) are important in the assessment of lower urinary tract dysfunction and incontinence in both sexes. However a diagnosis is not always made. The most common reasons are:

1. failure to reproduce typical symptoms (for example urgency or incontinence)
2. an equivocal pressure-flow nomogram on voiding
3. inability to void successfully during the investigation (bashful bladder).

The International Continence Society suggests that ambulatory urodynamic monitoring is indicated in patients with lower urinary tract symptoms that a conventional urodynamic investigation fails to reproduce or explain (1). The natural filling and extended period of monitoring may allow a more representative result. Also the patient is able to replicate activities that provoke symptoms.

In this study we decided to audit the results of our AUS to determine if they really were improving diagnostic accuracy.

Methods

Since 1999 we have been performing AUS on all patients where the conventional study did not provide a diagnosis for one of the reasons above.

AUS were carried out based on ICS guidelines (1) over a period of 2 – 3 hours. During this time the patient kept a diary so that any abnormal detrusor activity could later be correlated with symptoms. In patients being investigated for incontinence a leak transducer was used in order to allow accurate timing and quantification of any urine loss. At least 2 voids were performed during investigation of outflow obstruction.

Results

In total 46 men and 22 women with inconclusive CUS had undergone AUS at the time of study. Results are summarised in the table and show that in each group a diagnosis was made in over 60% of patients.

Reason for AUS	DIAGNOSIS MADE	NO DIAGNOSIS MADE
Symptoms not reproduced (n=22)	14 (64%) detrusor overactivity=7 stress incontinence=7	8 (38%) symptoms not reproduced=8
Equivocal obstruction (n=31)	19 (61%) obstructed=8 not obstructed=11	12 (39%) equivocal=12
Inability to void (bashful bladder) (n=15)	10 (67%) obstructed=4 not obstructed=6	5 (33%) equivocal=3, failed=2

Conclusions

Controversy has existed over the roles of conventional and ambulatory urodynamic studies in investigating lower urinary tract symptoms. There is no doubt that the two tests are not strictly comparable. For example AUS seems to be more sensitive for detecting detrusor overactivity. As yet it is unclear whether the additional data provided by AUS will alter long-term outcomes. However they do provide a high diagnostic yield in this potentially difficult group of patients. AUS are relatively cheap and easy to perform and we would therefore suggest that they should be available in every urology department.

1. van Waalwijk van Doorn E., Anders K., Khullar, V. et al. Neurourology and Urodynamics 19; 113 – 125 (2000)